

PATENT CLAIMS

1. A horizontal-axis electrical machine (10), comprising a casing (14, 15, 16), which is reinforced by casing ribs (24, ..., 27, 30) and is subdivided into a bottom casing section (15) and a removable top casing section (16), and comprising a laminated stator core (11), which is braced in bearing rings (13, 13', 13''), which are arranged perpendicular to the longitudinal axis (36) of the machine, are spaced apart from one another and are resiliently connected at a plurality of points of their outer circumference to the bottom casing section (15) by means of fastening parts (18, 19, 20, 21), characterized in that between the laminated stator core (11) or the bearing rings (13, 13', 13'') and the bottom casing section (15) there are arranged fixedly adjusted securing means (31, ..., 35), which during transportation of the machine (10) limit the axial relative movement between the laminated stator core (11) or the bearing rings (13, 13', 13'') and the bottom casing section (15), and during operation ensure a free expansion of the warmer laminated stator core (11) with respect to the colder casing (14, 15, 16).
2. The machine as claimed in claim 1, characterized in that the casing ribs (24, ..., 27, 30) run parallel to the bearing rings (13, 13', 13''), and in that the securing means (31, ..., 35) are respectively arranged between a bearing ring (13, 13', 13'') and a neighboring casing rib (24, ..., 27, 30).
3. The machine as claimed in claim 2, characterized in that the securing means are designed as spacers (31, ..., 33) which extend between the respective bearing ring and the neighbouring casing rib, and which are connected by one end securely to the bearing ring or the neighboring casing rib and have a clearance (SP) between the other end and the neighboring casing rib or the bearing ring.

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4. The machine as claimed in claim 3, characterized in that the spacers (31,..., 33) are designed such that they are adjustable in their length.

5. The machine as claimed in claim 4, characterized in that the spacers (31,..., 33) comprise in each case a threaded sleeve (34) and a screw (35) screwed into the threaded sleeve (34).

6. The machine as claimed in ~~one of claims 3 to 5~~, characterized in that the laminated stator core (11) extends on both sides of a vertical center plane (37) oriented perpendicular to the longitudinal axis (36) of the machine, and in that the spacers (31, 32) for the bearing rings (13, 13') further away from the vertical center plane (37) are respectively arranged only between the bearing ring and the neighboring casing rib (30 or 25) lying closer to the vertical center plane (37).

7. The machine as claimed in claim 6, characterized in that the spacers (33) for the bearing rings (13'') lying closer to the vertical center plane (37) are respectively arranged between the bearing ring and the two neighboring casing ribs (26, 27).

8. The machine as claimed in ~~one of claims 1 to 7~~, characterized in that the fastening parts comprise elongate fastening plates (19) which act as leaf springs, are vertically arranged and are securely connected, in particular welded, in each case in the middle region to the bottom casing section (15) and at the ends to the bearing rings (13, 13', 13'').

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